



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,529	03/15/2001	William A. Spalding	194-26331-US	4526

23770 7590 07/03/2003

PAULA D. MORRIS & ASSOCIATES, P.C.
10260 WESTHEIMER, SUITE 360
HOUSTON, TX 77042

EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/809,529

Applicant(s)

SPALDING, WILLIAM A.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 9 & 23, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-8 and 144-210 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-8 and 144-210 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 4-8 and 144-210 are pending. The extension of time and request for continued examination filed on May 9, 2003 has been entered as Paper No. 11. Claims 1-3¹, 9, 11-13, 15-16, 18-76 and 82-143 were canceled; and new claims 144-210 were added by the amendment filed on May 9, 2003, Paper No. 12. The corrected Declaration filed on May 9, 2003 has been entered as Paper No. 13 is acknowledged.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 9, 2003, Paper No. 11, has been entered.

Information Disclosure Statement

2. The information disclosure statement filed May 9, 2003 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the abstract obtained via the internet lacks a date. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the

¹ Claim 2 was canceled in the amendment filed Oct. 31, 2002, Paper No. 9.

time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Attention is directed to paragraph 3 of the last Official Office Action. The abstract from the Internet fails to provide a date and remains improper. This appears to be a moot point since the examiner has cited the WO 00/09856 reference, which has a English language abstract, on the form PTO-892 attached to Paper No. 10.

The remaining US Patent references on the Form PTO 1449 were considered and have been crossed off as duplicates.

Claim Objections

3. Claims 154 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 154 is dependent on claim 144 and sets forth the demulsifier as "an amine salt of a sulfonic acid". Claim 144 sets forth several demulsifiers including "salts of alkylaryl sulfonic acid". Since claim 154 does not refer to "the" or "said" sulfonic acid" of claim 144 or set forth "an amine salt of an alkylaryl sulfonic acid", claim 154 is necessarily broader than claim 144 and includes other sulfonic acid salts than alkylaryl sulfonic acid salts.

Double Patenting

4. Applicant is advised that should claims 144, 146, 153 and 155 be found allowable, claims 178, 158, 182, and 186, respectively, will be objected to under 37

CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claims 146 and 158 are limited to the same organic solvents, ie, EGMBE or EGMME. All the other limitations are the same.

Independent claim 177 differs from 144 in the nonionic surfactant. It is noted, claim 177 is less restrictive than 144. Attention is specifically directed to 37 CFR § 1.75(b) and (g). Claim 178, dependent on claim 177 sets forth the same limitations for the nonionic surfactant set forth in claim 144.

Applicant should review the 71 claims for proper claim drafting and eliminate any duplicate claims.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5-7 and 156 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5-7 are dependent either directly or indirectly on canceled claim 1. It is unclear what are applicant's intent regarding claims 5-8. Claims 5-7 are not rejected over prior art because they are so unclear that a comparison with the prior art is not reasonably appropriate.

In claim 156, the phrase "a demulsifying amount of a demulsifier effective to perform a function" is verbose and confusing. The phrase "a function" is not defined and suggests an additional un-named function. It is unclear what claimed scope applicant intends.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 8 and 144-210 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juprasert et al., US 5,942,469, in view of **McCutcheon's Volume 1: Emulsifiers & Detergents North American Edition 1993** (McCutcheon Division, MC Publishing Co., Glen Rock NJ, USA, copyright 1993) pages 27 and 86, 01-1994; Mokadam, US 5,797,456, and Gardner et al., 5,008,026, and Melikyan et al, US 5,602,090. Juprasert et al (claims, columns 6 to 8, column 11, line 59 to column 12, line 6; and examples) discloses compositions comprising a defoaming agent, a demulsifying agent and stabilizing agents. The demulsifiers may be anionic and/or nonionic and the stabilizers include glycols and glycol ethers. The compositions are added to oil-brine-gas systems to defoam and break the emulsions. The functional language is implicit to formulating a composition effective to defoam and de-emulsify as disclosed. Juprasert et al (column 5, line 16) teaches the use of water or brine.

Juprasert et al differs from the claims in an explicit disclosure of the claimed demulsifiers, the particular combinations of agents and the concentrations set forth in dependent claims.

Juprasert et al exemplifies the use of Pluronic® surfactants (polyether copolymers) in combination with a solvent, propylene glycol, and Pluronic® surfactants with Igepal® surfactants. Juprasert et al (column 7, line 56, and column 8, lines 3-12) discloses ethoxylated alcohols and mixtures of surfactants, one having an HLB of less than 10 and the other having an HLB of greater than 12. Juprasert et al exemplifies the use of two surfactants having an HLB of 8 and 12.

McCutcheon's (pages 27 and 86) discloses commonly known surfactants designated commercially as Igepal® surfactants and Brij® surfactants. McCutcheon's discloses numerous surfactants as examples of ethoxylated alcohols having the required HLB specified and contemplated in the in the Juprasert et al reference and corresponding to the exemplified materials.

Juprasert et al (column 2, lines 22 et seq and claims) discloses compositions comprising a defoaming agent, a demulsifying agent and a stabilizing agent to stabilize the concentrate as an emulsion. Juprasert et al (column 4, lines 16-28) discloses:

"the wellbore treatment concentrate is an aqueous mixture comprising (1) about 1 to about 20%, more preferably about 0.5 to about 5%, and most preferably about 0.5 to about 2% of said defoaming agent, (2) about 1 to about 10%, more preferably about 2 to about 8%, and most preferably about 3 to about 6% of said demulsifying agent, (3) about 1 to about 15%, more preferably about 5 to about 14%, and most preferably about 8 to about 12%, of said emulsifying agent, when present and, (4) up to about 20%, more preferably about 0.1% to about 15%, and most preferably about 1 to about 15% of said stabilizing agent, when present. All percentages herein are on a weight basis unless noted otherwise."

Juprasert et al (column 4, lines 38-53) discloses:

"(1) the demulsifying agent comprises one or more (preferably 1 to 3) first surface active agents wherein each first surface active agent independently comprises from about 0.5 to about 10%, more preferably about 1 to about 5%, and most preferably about 1 to about 3% of the concentrate, (2) the emulsifying agent, when present, comprises one or more (preferably 2 to 3) second surface active agents wherein each second surface active agent independently comprises from about 0.5 to about 12%, more preferably about 5 to about 12%, and most preferably about 8 to about 12% of the concentrate, and (3) the stabilizing agent, when present, comprises one or more (preferably 1 to 3) stabilizers wherein each stabilizer independently comprises from about 0.1 to about 16%, more preferably about 0.5 to about 16%, and most preferably about 1 to about 15% of the concentrate."

Juprasert et al (column 7, lines 50 et seq) discloses emulsifying agents including ethoxylated alcohols column 7, line 56). Juprasert et al (column 4, lines 38-53) discloses the emulsifying combination preferably is a combination of different HLB emulsifiers having HLB values centers around 10 and 12. The HLB value of the combination is art known to be the sum of the partial HLB values, eg., (50% *HLB 9 + 50% HLB 13 = HLB 11). Juprasert et al (column 6, line 1 to column 7, line 50) discloses demulsifying surfactants including alkyl benzene sulfonates (column 7, lines 47). Juprasert et al (column 8, lines 24 et seq) discloses stabilizers that include glycols and polyglycol ethers. Said stabilizers read on mutual solvents. Juprasert et al (column 11, line 59 to column 12, line 6) discloses the concentrates may be used by itself or combined with solvent pretreatment employing solvents including glycols and glycol ethers. Said glycol ethers read on the instant mutual solvents.

Mokadam (abstract and column 4, lines 47 et seq) discloses antisludge and demulsifying compositions. Mokadam (column 1, lines 27 et seq) characterizes the formation of sludge as a results of emulsion formation associated with high viscosity.

Art Unit: 1712.

Mokadam (column 4, lines 47 et seq) discloses a commercial antisludge composition comprising water based dodecyl benzene sulfonic acid, nonionic surfactant, alcohol and dispersant.

Gardner et al teaches well treating compositions. Gardner et al (column 4, lines 23 et seq) teaches the addition of a mutual solvent to make otherwise insoluble chemicals soluble in the aqueous phase. Gardner et al employs ethoxylated alcohols and cosolvents (EGMBE) overlapping those disclosed in the Juprasert et al reference.

Melikyan et al (column 2, lines 27-34; example and claims) discloses biodegradable industrial compositions employing sulfonates, nonionic surfactants and glycol ether solvents. Melikyan et al discloses the use of Biosoft N-411, a commercial isopropylamine linear dodecylbenzene sulfonate, in combination with ethylene glycol monobutyl ether (EGMBE) and Neodol 25-9 (HLB 13.1).

These references are combinable because they teach oil well treatment compositions and oil solubilizing compositions. It would have been obvious to one of ordinary skilled in the art at the time of applicants invention to employ a dodecyl benzene sulfonate, nonionic surfactant and a glycolether solvent as an obvious combination closely related to the conventional commercial products employed as antisludge compositions with demulsification properties as disclosed in the Mokadam reference. The use of the particular isopropylamine dodecyl benzene sulfonate species is an obvious commercially available dodecyl benzene sulfonate salt as shown in the Melikyan et al reference.

Variation of the concentration would have been obvious to one of ordinary skilled in the art at the time of applicants' invention in view of the Juprasert et al disclosed concentrations and the use of the disclosed concentrates with solvent pre-treatments clearly disclosed in the Juprasert et al reference.

These references are combinable because they teach surfactant compositions and a common source reference listing commercially available surfactants and their structure and properties. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ an ethoxylated alcohol such as the Brij® ethoxylated alcohols as a functional equivalent to the ethoxylated nonylphenols exemplified in the Juprasert et al reference and both broadly taught in the Juprasert et al reference.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ an mutual solvent for the advantages taught in the Gardner et al reference of improving solubilization of the insoluble nonionic surfactants used in the Juprasert et al reference.

Response to Arguments

9. Applicant's arguments filed May 9, 2003 have been fully considered but they are not persuasive.
10. The examiner notes applicant's remarks regarding the Information Disclosure Statement. This has been addressed above.
11. The examiner notes applicant's remarks regarding the claim objections. The remaining issues have been addressed above.

12. The examiner notes applicant's remarks regarding the duplicate claims. These have been addressed above.

13. The examiner notes applicant's remarks regarding the claim rejections under 35 USC 112, second paragraph. Attention is directed to the above rejection above.

14. Applicants (page 22) assert the examiner has not presented a *prima facie* case of obviousness and the examiner cannot establish a *prima facie* obviousness by merely arguing the claimed combination could be made by modifying one cited reference to incorporate something not taught in the reference itself or by another cited reference.

This is not deemed to be persuasive because of the following reasons. Initially, applicant sets forth a conclusion but fails to point out what element of the claim is not taught in the Juprasert et al reference or the secondary references.

The Juprasert et al reference specifically teaches demulsifying surfactants including alkyl benzene sulfonates (column 7, lines 47) and mixtures of anionic and nonionic materials reading on the claims as demulsifiers and first nonionic solubilizing surfactant.

The Juprasert et al reference further teaches (column 8, line 24) alcohol stabilizers including polyethers.

Mokadam further (column 4, lines 47 et seq) discloses a commercial antisludge composition alkylbenzene sulfonates stabilized with nonionic ethoxylates and lower alcohols as conventional demulsifier/antisludge agents, which are commercially available.

Gardener et al further teaches the conventional use of EGMBE as a mutual solvent in concentrates to make otherwise insoluble chemicals more soluble. The Juprasert et al reference teaches their compositions as concentrates (see column 4, line 53).

McCutcheon's is further cited to show the nonionic surfactants having the HLB set forth in the Juprasert et al reference are well known to those having ordinary skill in the art at the time of the invention.

To the extent applicant asserts the use of 2-propanamine salt of dodecyl benzene sulfonic acid is not specifically taught in the reference, said alkylbenzene sulfonate is a conventionally commercially available sulfonate as shown by newly cited Melikyan et al reference.

Applicants has shown no evidence or reasoned argument why the particular combination is advantageous over the compositions disclosed or taught as obvious in the prior art. Furthermore, applicants are employing the art taught compounds in art taught compositions for their art recognized function as set forth in the references. The reasons to modify the references are clearly set forth in the references for the functions taught and their commercial use in related compositions.

15. Applicant directs attention to claim 168 but fails to set forth what element is lacking in the prior art teaching.


Art Unit: 1712

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM
June 29, 2003